

A FRONT-MOUNTED WATER-SEPARATION PROPELLER**TECHNICAL FIELD**

This invention refers to a new type of water-separation propeller that will be installed in front of the vessel.

5

BACKGROUND OF INVENTION

Nowadays, there is no dynamic installation in the field of ship's propeller, by which the frontal resistance may greatly reduce and the advance force may increase, as to raise the vessel's speed. It's known that the density of water is over 800 times higher than that of air. When a vessel is navigating, it encounters resistance from water. Its frontal resistance from water amounts to more than 80% of the total resistance. Therefore, it is less effective to raise the vessel's speed by the means of either changing the external structure of the vessel or singly enhancing the advance force.

15 **CONTENTS OF INVENTION**

This new type of propeller is composed of an influent tube, a left thin, flat gushing gutter, a right thin, flat gushing gutter, a booster and its axle, and screwed connections. The booster sucks the water through the influent tube right from the front of the vessel, and then conveys the water with high speed by both wing-like gushing gutters to the side back of the vessel.

20 This gushing high-speed water can largely push the vessel forward. Meanwhile, with the raise of speed of the vessel, the frontal resistance from water increases, the gushing water with high speed from both sided-gutters will form into a water-separation force in front of the vessel, as a result of reduce of resistance. Moreover, this gushing water may become turbulence to reduce the useless efficiency caused by the induced-flow.

25 This inventive design is structurally simple, costly low, ensuring no need to change the current configuration while attaching on the vessel. Compared to the current technology in this area, it fills the blank with front-mounted water-separation propeller. It may also play an energy-conservation, environment-protection role.

BRIEF EXPLANATION OF ATTACHED DIAGRAMS

Diagram 1 is a cross-sectional view of the structure of this invention, in which,

1= influence tube, 2= left thin, flat gushing gutter, 3= right thin, flat gushing gutter, 4= booster, 5= axle of booster, 6= screwed connection.

- 5 From attached diagram, you may find the propeller of this invention consists of influence tube 1, left thin, flat gushing gutter 2, right thin, flat gushing gutter 3, and screwed connection 6, being as the external part of this invention, and booster 4, axle of booster 5, being as the interior part. Screwed connections are the parts of attaching this invention on the front of vessel.
- 10 In this invention, this propeller will start to push the vessel when the flowing speed in the influence tube 1 is higher than the speed of vessel, and the efficiency of water-separation and advance will increase with the ratio of the flowing speed in the influence tube 1.